

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Jane Lu et al

Serial No. (not yet assigned)

Filed: February 24, 2004 (concurrently herewith)

For: METAL CORE SUBSTRATE PRINTED BOARD ENABLING  
THERMALLY ENHANCED BALL GRID ARRAY (BGA)  
PACKAGES AND METHOD

## INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application;  
or before mailing date of first Office action on the merits; whichever occurs last.)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Certification under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance,  
whichever occurs first.)
- ☐ under 37 CFR 1.97(d) together with either a:  
☐ Certification under 37 CFR 1.97(e), and  
☐ a petition under 37 CFR 1.97(d)(2)(ii), and  
☐ a \$130.00 petition fee set forth in 37 CFR §117(i)(1).  
(Filed after final action or notice of allowance, whichever occurs first, but before  
payment of the issue fee.)

Applicant(s) submits herewith a copy of the Form PTO 1449-Information Disclosure Citation as filed in parent application Serial No. 09/544,263 together with copies of patents, publications or other information of which applicant(s) is aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. A copy of the abstract of JP 8,078,595 is also attached. (Copies of the U.S. references have not been supplied as they were supplied in the divisional parent application. If the Examiner requires copies of the U.S. references, he is requested to contact the undersigned attorney.)

The relevance of the attached references is that this is the closest art of which applicant(s) is aware.

Applicant(s) submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

Respectfully submitted,

Jim Zegeer, Reg. No. 18,957  
Attorney for Applicant(s)

Attachments:

Form PTO-1449 and JP 8,078,595 abstract

Suite 108  
801 North Pitt Street  
Alexandria, VA 22314  
Telephone: 703-684-8333  
Date: February 24, 2004

In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.

<b>FORM PTO-1449</b> U.S. Department of Commerce (MODIFIED) Patent and Trademark Office  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)	<b>ATTY. DOCKET NO.</b> <b>2946-Z</b>	<b>SERIAL NO.</b> <b>09/544,263</b>
	<b>APPLICANT</b> <b>Jane LU et al</b>	
	<b>FILING DATE</b> <b>April 6, 2000</b>	<b>GROUP</b> <b>2841</b>

### U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,844,308	12/1998	Dedert et al	257	692	
	5,796,159	08/1998	Kierse	257	668	
	5,541,446	07/1996	Kierse	257	666	
	5,378,859	01/1995	Shirasaki et al	174	261	
	3,401,126	09/1968	Miller et al	252	514	
	3,429,040	02/1969	Miller	29	626	
	3,436,818	04/1969	Merrin et al	29	626	
	3,564,522	02/1971	Stevens, Jr.	340	174.1	
	3,949,125	04/1976	Roberts	428	99	
	4,229,248	10/1980	Silverman et al	156	653	
	4,462,534	07/1984	Bitailou et al	228	180	

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
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**EXAMINER:** Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce  
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**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4,504,283	03/1985	Charvat	51	298	
	4,546,541	10/1985	Reid	29	603	
	4,579,806	04/1986	Schupp et al	430	280	
	4,761,699	08/1988	Ainslie et al	360	103	
	4,818,728	04/1989	Rai et al	437	209	
	4,825,284	04/1989	Soga et al	347	80	
	4,864,471	09/1989	Hargasser et al	361	417	
	4,996,623	02/1991	Erpelding et al	360	104	
	4,999,699	03/1991	Christie et al	357	65	
	5,121,190	06/1992	Hsiao et al	357	80	
	5,128,746	07/1992	Pennisi et al	357	72	

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	8,078,595A	03/1996	Japan				X

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**


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**2841****U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,334,857	08/1994	Mennitt et al	257	48	
	5,574,629	11/1996	Sullivan	361	767	

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

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